

**REMARKS**

Reconsideration and allowance are requested.

Claims 17-34 are canceled in favor of new claims 35-55. New claims 35-46 focus on example embodiments, such as those illustrated in Figures 3, 5, 7, and 11 of the original application, where the composite signal includes both converted and non-converted signals. Example support may be found in these figures and in their accompanying description in the specification. New claims 47-55 focus on example embodiments, such as those illustrated in Figures 9 and 13 of the original application, where the composite signal includes all converted signals. Example support may be found in these figures and in their accompanying description in the specification. Approval and entry are requested.

All claims stand rejected under 35 U.S.C. §102(b) as allegedly being anticipated by newly-cited USP 5,067,173 to Gordon. This rejection is respectfully traversed.

Gordon teaches receiving a radio signal from a mobile station at separate diversity antennas of a microcellular station, frequency-shifting one of the antenna signals 116, and combining the shifted signal with a non-shifted antenna signal 114 received from the mobile station.

To establish that a claim is anticipated, the Examiner must point out where each and every limitation in the claim is found in a single prior art reference. *Scripps Clinic & Research Found. v. Genentec, Inc.*, 927 F.2d 1565 (Fed. Cir. 1991). Every limitation contained in the claims must be present in the reference, and if even one limitation is missing from the reference, then it does not anticipate the claim. *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565 (Fed. Cir. 1986). Gordon fails to satisfy this rigorous standard.

Figure 1 of Gordon shows a microcell station 107 coupled to a main base station 100, and Figure 2 shows further details of the microcell station 107. Multiple independent claim features are missing from Gordon.

For example, there is no teaching of a tower mounted amplifier unit (TMA), as recited in all the independent claims.

Although Gordon teaches a filter 208 filtering the converted signal 207, Gordon also lacks the claimed additional band pass filter that filters the claimed composite signal, as recited in all the independent claims.

Still further, Gordon fails to disclose forwarding the band pass filtered composite signal on a single external feeder to a radio base station such that a number of feeders required between the radio base station and the TMA is reduced, as recited in claims 35 and 47. The Examiner contends that lead 213 in Gordon's Figure 2 corresponds to the claimed single feeder. Applicant disagrees. Lead 213 does not function as an external feeder to the externally located main base station 100. Rather, lead 213 is internal to the micro base station 107 and is therefore not an external feeder. Lead 213 actually corresponds more closely to the output of the combiner in Figure 3 of the instant application. In fact, Gordon uses two external feeders, each feeder being connected to a respective antenna 116 and 114.

Regarding new claim 47, Gordon also fails to teach "converting in the TMA each of the received diversity antenna signals into a corresponding number of different frequency signals by mixing with a first set of a corresponding number of reference signals," "band pass filtering each converted diversity antenna signal using a respective band pass filter included in the TMA," and "combining in the TMA each filtered diversity antenna signal and a non-converted received diversity antenna signal into a composite signal." In contrast, only antenna signal 116 is

converted in Gordon; antenna signal 114 is not. See col. 4, lines 37-41. Analogous features are found in claim 51.

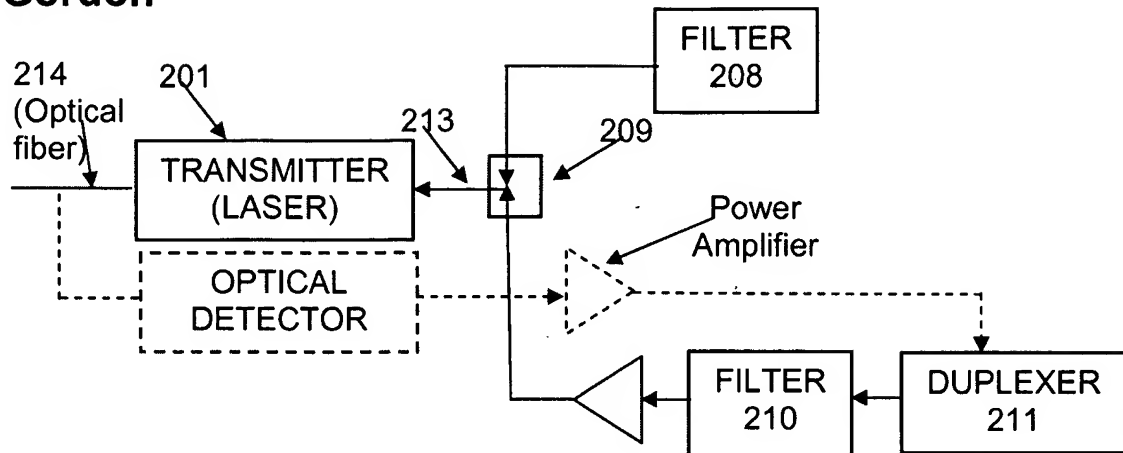
Thus, multiple features from the independent claims are missing from Gordon. Just one missing claim feature obviates the anticipation rejection.

In the obviousness rejection of previous claims 32-34 on pages 9-10 of the office action, the Examiner argues that it would have been obvious to include TMAs from Figure 1 in the instant application in Gordon's micro-base station because the TMAs "will help in amplifying the received signal for processing." Applicants respectfully disagree.

Gordon's micro-base station uses a downlink optical transmitter 201 (a laser) that is coupled to the base station 100 via an optical link 202. The office action fails to explain how Gordon would be modified to incorporate the TMAs from instant Figure 1. Would the two feeder branches in Gordon, i.e., feeder branch one including 116, 203-208 and feeder branch two including 114, 210-212, be replaced by two TMAs from instant Figure 1?

In addition, in order for Gordon's system to work, the main base station 100 must convert the received optical signal into an electrical radio signal, which requires an optical detector and a power amplifier (as illustrated in the dashed lines added to Gordon's Figure 2 below) for downlink transmissions from the base station.

**FIG. 2**  
**Gordon**



But the TMAs in instant Figure 1 do not include optical detectors; nor do they include transmit power amplifiers for downlink transmission to the base station. So replacing Gordon's feeder branches with instant Figure 1 TMAs would render Gordon's system inoperable for its intended purpose. A proposed modification that renders a prior art reference inoperable for its intended purpose is inappropriate for an obviousness inquiry. *In re Fritch*, 972 F.2d 1260, 1265-66 (Fed. Cir. 1992). Also, in order for Gordon's system to function as a transmitter, a power amplifier like that shown is required. In other words, Gordon's micro base station is not suitable as a TMA.

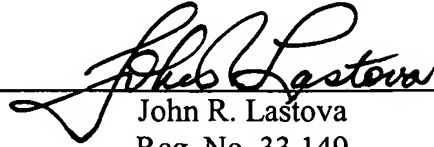
The application is in condition for allowance. An early notice to that effect is requested.

Skarby et al.  
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Respectfully submitted,

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